



2018 Secretary of Defense Environmental Awards Environmental Restoration, Installation Award

Each year since 1962, the Secretary of Defense has honored installations, teams, and individuals for outstanding conservation achievements, innovative environmental practices, and partnerships that improve quality of life and promote efficiencies without compromising the Department of Defense's (DoD) mission success. The 2018 Secretary of Defense Environmental Awards cycle encompasses an achievement period from October 1, 2015 through September 30, 2017 (Fiscal Year (FY) 2016-2017). A diverse panel of 63 judges with relevant expertise representing Federal and state agencies, academia, and the private sector evaluated all nominees to select one winner for each of the nine categories that cover six subject areas: natural resources conservation, environmental quality, sustainability, environmental restoration, cultural resources management, and environmental excellence in weapon system acquisition.

About the Environmental Restoration, Installation Award

The Environmental Restoration, Installation award recognizes efforts by installations to protect human health and the environment by cleaning up identified DoD sites in a timely, cost-efficient, and responsive manner. Restoring these sites impacted by past defense practices protects military personnel and the public from potential environmental health and safety hazards. The 2018 winner of the Environmental Restoration, Installation award is *Vandenberg Air Force Base, California*.

About Vandenberg Air Force Base, California

Vandenberg Air Force Base (AFB) is located in western Santa Barbara County, California. The 30th Space Wing, Vandenberg AFB's host unit, supports West Coast launch activities for the Air Force, DoD, National Aeronautics and Space Administration, national programs, and various private industry contractors. Vandenberg AFB is home to 2,892 military personnel, 3,785 family members, 1,143 DoD civilians, 2,822 contractors, and serves approximately 8,000 military retirees living in the area. The space and missile launch mission at Vandenberg AFB is unlike most other defense installations that

focus on military training and weapon system testing. Vandenberg's launch operations, particularly during the Cold War era, left behind a legacy of soil and groundwater contamination on which the Environmental Restoration Program



Panorama of Vandenberg AFB looking towards the Santa Barbara Channel from Tranquillon Peak. The installation protects and preserves more than 42 miles of coastline.

focuses. The resultant massive scale of environmental investigation and cleanup presents an immense programmatic and management challenge to ensure compatibility with critical ongoing and proposed mission activities. At more than 99,000 acres, Vandenberg AFB encompasses some of the highest quality coastal habitat in central California. With a wealth of invaluable cultural and ecological treasures, the installation is recognized by regulators and the public for protecting and preserving 42 miles of pristine coastline, 9,000 acres of sand dunes, 5,000 acres of wetlands, more than 1,600 prehistoric archaeological resources, 14 rock art sites, one National Historic Landmark, five Native American village sites, one National Historic Trail, 26 Cold War-era complexes, and 17 endangered or threatened species.

Major Accomplishments in FY 2016-2017

- Vandenberg AFB oversaw and actively managed the Air Force's largest performance-based restoration (PBR) contract, valued at \$125 million over a 10-year span to address 107 cleanup sites. Through collaborative efforts, the team accelerated various aspects of the program, resulting in cost savings and response complete or site closure ahead of schedule for 44 PBR sites. Additionally, 55 sites are on schedule for on-time and/or accelerated closure.



- A massive wildfire in 2016 impacted 12,500 acres, requiring concerted efforts by approximately 900 firefighters and several air tankers to suppress the inferno. Vast portions of the fire area overlapped with unexploded ordnance risk areas, requiring extensive coordination between the restoration program, safety personnel, and firefighters to ensure safety for installation personnel and their off-base neighbors.

The Canyon Fire ravaged land near launch areas and burned 12,500 acres. The Environmental Restoration Program used unexploded ordnance data and maps to ensure safety of firefighters and quickly developed an emergent Time-Critical Removal Action for 4,300 acres.

- Vandenberg AFB fielded multiple successful treatment systems using groundwater recirculation. Staff reduced a nine-acre plume from 23,000 $\mu\text{g/L}$ to 5,000 $\mu\text{g/L}$ in one year. Through proactive implementation, the base achieved a 99% reduction of volatile organic compounds at one site. At another site, staff converted the soil vapor extraction system to passive solar power resulting in \$75,000 in annual savings.



- Vandenberg applied innovative approaches to the installation's large-scale monitoring program and leveraged unique methodologies to achieve site closure based on risk. Installation personnel applied a fresh, human health risk assessment approach to total petroleum hydrocarbon evaluation. This approach achieved closeouts for dozens of sites with contamination as high as 230,000 parts per million left in place.

Vandenberg AFB developed mobile in-situ remediation equipment using groundwater recirculation. The equipment helps to implement a sustainable approach to efficiently remediate a wide array of sites while also saving water.

- The base employed a programmatic statistical comparison of passive sampling data to historical data. Staff worked through key data requirements and implemented the transition in just nine months with full stakeholder concurrence. No-purge sampling yielded high-quality data and achieved a 20% overall cost reduction.